

CLAIMS:

1. A dual communication channel remote telemetry system comprising:

at least one central controller configured to generate at least one control message and to receive at least one reporting message, said at least one central controller further configured to access a broadcast communications channel for carrying said control message and to access a shared two-way communications channel for receiving said reporting message;

a plurality of remote telemetry units configured to measure at least one local parameter and to generate at least one reporting message, each of said plurality of remote telemetry units having a unique identifier and having a receiver configured to receive said control message over said broadcast communications channel and a transceiver configured for communicating said reporting message to said at least one central controller over said shared two-way communications channel.

2. The dual communications channel remote telemetry system of claim 1 wherein said broadcast communications channel is a cellular paging system.

3. The dual communications channel remote telemetry system of Claim 2 wherein each of said receivers is a cellular pager having a shared cellular pager identification number.

4. The dual communications channel remote telemetry system of claim 1 wherein said broadcast communications channel is a radio transmission system.

5. The dual communications channel remote telemetry system of Claim 4 wherein each of said receivers is a radio receiver.

6. The dual communications channel remote telemetry system of Claim 5 wherein said radio transmission system is a high-power and low data rate radio transmission system, and each of said radio receivers is a low-power radio receiver, optimized for power consumption.

7. The dual communications channel remote telemetry system of claim 1 wherein said shared two-way communications channel is a subscriber telephone line, said transceiver associated with each of said remote telemetry units configured as an extension to said subscriber telephone line.

8. The dual communications channel remote telemetry system of Claim 7 wherein said subscriber telephone line further comprises said broadcast communications channel, said transceiver associated with each of said remote telemetry units configured with a shared telephone number as a subscriber party telephone line.

9. The dual communications channel remote telemetry system of Claim 8 wherein said control message comprises DTMF codes.

10. The dual communications channel remote telemetry system of claim 1 wherein said shared two-way communications channel is a cellular radiotelephone network, said transceiver associated with each of said remote telemetry units configured as a cellular radio telephone.

11. The dual communications channel remote telemetry system of claim 10 wherein each of said cellular radio telephones is configured with the same cellular identification number.

12. The dual communications channel remote telemetry system of Claim 1 wherein simultaneous access to said shared two-way communications channel is restricted to one of said transceivers associated with said remote telemetry units.

13. The dual communications channel remote telemetry system of Claim 1 where media access control for said shared two-way communications channel is regulated by said central controller utilizing said control messages transmitted on said broadcast communications channel.

14. The dual communications channel remote telemetry system of Claim 1 wherein said control message carried by said broadcast communications channel is received by each of said plurality of remote telemetry units.

15. The dual communications channel remote telemetry system of Claim 14 wherein each of said plurality of remote telemetry units is configured to respond to said control message carried by said broadcast communications channel.

16. The dual communications channel remote telemetry system of Claim 14 wherein said control message includes a remote telemetry recipient identifier, only said remote telemetry unit having said unique identifier matching said remote telemetry recipient identifier configured to respond to said control message carried by said broadcast communications channel.

17. A method of remote telemetering in a dual communications pathway system in which at least one central controller having a broadcast communications pathway and a shared two-way communication pathway communicates with a plurality of remote telemetry units each having a unique identifier, said broadcast

communications pathway carrying at least one control message and said shared two-way communications pathway carrying at least one reporting message, the method comprising the steps of:

generating, at said at least one central controller, a control message for
5 transmission to said plurality of remote telemetry units, said control message including a recipient identifier associated with one of said plurality of remote telemetry units;

transmitting said control message from said at least one central controller over said broadcast communications pathway;

receiving, at each of said plurality of remote telemetry units, said control
10 message;

comparing, at each of said plurality of remote telemetry units, said recipient identifier included in said control message with said unique identification code of said receiving remote telemetry unit; and

responsive to a match between said recipient identifier and said associated
15 unique identification code, one of said plurality of remote telemetry units performing an operation instructed in said control message.

18. The method of remote telemetering in a dual communications pathway system of claim 17 further including the steps of:

responsive to said operation, establishing a communication link between said
20 one of said plurality of remote telemetry units and said at least one central control over said shared two-way communications pathway;

transmitting at least one reporting message from said one of said plurality of remote telemetry units to said at least one central controller over said communication link; and

closing said communication link upon completion of said reporting message

5 transmission to said at least one central controller.

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